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ABSTRACT

This study was designed to test the effects of a teaching candidate's age and the effect of the type of position under consideration on candidate ratings as assessed from a videotaped interview simulation. Independent variables manipulated were (1) candidate age in the taped interview (27 or 43 years old) and (2) the type of position under consideration (physical education teacher or social studies teacher). Candidates were evaluated on six criteria: (1) curricular knowledge, (2) ability to transmit knowledge, (3) willingness to contribute, (4) ability to create a friendly classroom environment, (5) potential for professional growth, and (6) ability to maintain student discipline. Results indicated that neither candidate age nor type of position had significant effects on candidate ratings, nor did specific interactions of the independent variables. This result contradicts results of previous resume studies testing the same variables in selection decisions, thus raising questions concerning the generalizability of selection research findings based on resume studies. The following recommendations are made for future studies: (1) stronger age manipulation; (2) separation of the interview's effect from other selection stages; (3) exploration in a relative, rather than an absolute, context; and (4) exploration in a variety of occupational settings. Two tables and a three-page bibliography are appended. (Author/IW)

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DECISION MAKING IN VIDEOTAPED SELECTION INTERVIEWS: Age and Position Effects Retested *

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DECISION MAKING IN VIDEOTAPED SELECTION INTERVIEWS: Age and Position Effects Retested

Abstract

This study was designed to test the effects of a candidate's age and the effect of the type of position under consideration on candidate ratings as assessed from a videotaped interview simulation. To investigate the effect of these variables, a 2 x 2 factorial design was used. The independent variables manipulated were: (1) candidate age in the videotaped interview (27 or 43 years old), and (2) the type of position under consideration (physical education teacher or social studies teacher). Subjects participating in the study were graduate students enrolled in educational administration courses at a major midwestern university.

Candidates were evaluated on six criteria: (1) curricular knowledge, (2) ability to transmit knowledge, (3) willingness to contribute, (4) ability to create a friendly classroom environment, (5) potential for professional growth, and (6) ability to maintain student discipline. A composite score, an arithmetic sum of the six evaluative criteria, was computed and used as the dependent variable of candidate ratings. Results of a two-way Analysis of Variance indicated that there were no

significant main effects (i.e. candidate age and type of position) and also no specific interactions of the independent variables which significantly affected candidate ratings, although all canditate ratings were in the expected direction. This result contradicts the results of previous resume studies testing the same variables in selection decisions, thus raising questions concerning the generalizablility of selection research findings based on resume studies.

Introduction

Personnel selection research has become increasingly sophisticated since the early validity studies. Microanalytic research techniques have been used extensively in more recent selection research. However, in spite of increased attention to improved methodology, selection study results are still viewed skeptically due either to problems with the control of candidate and situational variables, or with the questionable generalizability to "real-world" settings. Further, most selection studies have been limited to business, industry, or military settings, with little attention given to any of the human service occupational areas.

The selection interview, in particular, has received a great deal of attention in the literature in spite of the fact that proportionately few studies examine specifically the interview stage of selection. Too often, inferences regarding final selection decisions are drawn from research on the initial screening stage of selection (i.e. resume studies). A recent review of literature (Arvey & Campion, 1982) emphasized the need for more research attention given to the interview stage of selection, as well as increased attention given to candidate

characteristics which may bias selection decisions (e.g. age, race, handicapping conditions).

The study reported here was designed to test the effects of one of these variables (candidate age) in combination with candidate position in a human service occupational area. Most importantly, the study was designed to examine the interview stage of selection in order to compare the results with those of related resume studies. Also, through the use of a videotaped interview, a high degree of control of candidate and situational variables was attained.

Bias in Selection

The most recent comprehensive review of personnel selection research emphasized the need for further investigation of interviewer bias in the personnel selection process (Arvey & Campion, 1982). Personnel selection studies have verified that interviewer attitudes bias judgment (Mayfield, 1964) and that the reasons for differential ratings are generally due to stereotyping or differential behavior emitted during the selection interview (Arvey & Campion, 1982). Research has also indicated that stereotyping may be especially evident when interacting with other variables. For instance, three studies showed a significant sex-by-position interaction effect in personnel selection (Cash, Gillen, & Burns, 1977; Cohen & Bunker, 1975; Shaw, 1972).

Although a fair amount of research has investigated sex bias in personnel selection, Arvey and Campion (1982) recommended that the variables of race, handicap, and especially age be investigated more thoroughly for possible biasing effects in the selection process. This type of investigation would be congruent with Schmitt's (1976) recommended model for selection research in which interviewee characteristics (i.e., age, race, sex) be tested for their impact on stereotypes and attitudes which might consequently influence the interview outcome.

Although there has been relatively little selection research conducted in education, a cluster of recent resume studies focuses on the effect of candidate age in teacher selection. One of the studies, using a physical education position as the focal position, found a significant effect due to candidate age. Younger candidates received higher ratings than did older candidates (Young & Allison, 1982).

These findings replicated the results of an earlier resume study done with industrial employers of semiskilled workers. Haefner (1976) found that employers preferred 25-year-old candidates to 55-year-old candidates for semiskilled positions. Similar results came from a study by Rosen and Jerdee (1976). In these studies, the data suggested that the preference for younger candidates could be influenced by the physical demand of the

position used in two of the studies (physical education teacher and semi-skilled worker).

In response to these criticisms, a subsequent resume study (Young & Voss, 1984) examined the effect of candidate age (29 or 49 years old) and teaching position (physical education or chemistry) on teacher candidate ratings. Results of this study revealed two significant main effects, as well as a significant interaction effect. The younger candidate was rated higher than the older candidate, chemistry teachers were rated higher than physical education teachers, and, as candidate age increased, the ratings of older physical education teacher candidates were more negatively affected than were those of the other three teacher candidates. A variety of explanations were offered regarding the interaction effect, one being that age is perceived to be a greater limitation in effectively performing the work of a physical education teacher than in performing the work of a chemistry teacher. Another explanation of this effect might be that chemistry teachers are simply more scarce, so that the enhanced demand for chemistry teachers over physical education teachers would have an inhibiting effect on age bias.

In analyzing the results of this study, Young & Voss (1984) made several recommendations for further research. They stated that although the effect of age bias for physical education positions

was clearly evident, the results were not as obvious for chemistry positions, possibly due to a current teacher shortage in that area. Thus, it was recommended that the effect of age bias be explored for other academic areas. Also, it was suggested that the effect of age on selection ratings might not be as potent in the interview stage of the selection process.

An Interview Study

In light of the relevant literature, it was important to design a study investigating bias in selection which: (1) particularly examined the interview stage of selection; (2) maximally controlled selection variables while maintaining as realistic practices as possible; and (3) was well-integrated with related studies so that results might have greater implications for understanding the decision making process in employee selection.

The purpose of this study was to explore further the effects of age on selection by examining the ratings of teacher candidates (27 or 43 years old) in a videotaped interview setting. In addition to manipulating candidate age, an accompanying set of resumes was used to manipulate the type of teaching positions examined--physical education or social studies. Physical education was used to determine if the age effect detected in previous studies would hold with a different selection technique -

the interview. The social studies position was chosen as a more "neutral" academic position which did not have the high market demand of chemistry, a possible confounding variable of the position used in the Young & Voss study.

Methodology

Procedures and Sample

Participants in the study consisted of graduate students enrolled in selected educational administration classes at a major midwestern university. Students enrolled in these courses were seeking certification as school administrators or were seeking advanced degrees in educational administration. All subjects (N=56) were randomly assigned to one of four treatment conditions:

1) videotaped interview (27 year old candidate)/physical education position;
2) videotaped interview (43 year old candidate)/physical education position;
3) videotaped interview (27 year old candidate)/social studies position;
4) videotaped interview (43 year old candidate)/ social studies position.

Subjects viewed a videotaped interview and received a packet of corresponding written materials which included: (1) instructions; (2) a position description; (3) a candidate resume with age (27 or 43 years old) and teacher preparation (physical education or social studies) varied; (4) a candidate evaluation form; and (5) respondent biographical information (i.e.

occupation, years of experience, age, sex, experience as an interviewer, and experience as an interviewee).

Instrumentation

To test the effects of candidate age in a simulated interview, a videotape was developed which consisted of a brief (6-1/2 minute) portion of a selection interview of a hypothetical teacher candidate. Although the interview length was short, research has suggested that interviewers tend to make a decision about a candidate within the first four minutes of the interview (Springbett, 1958). The content of the interview script was written to be closely aligned with the information supplied in related resume studies and to be somewhat "generic" in content.

All aspects of the interview, including candidate characteristics, were held constant with the exception of the cosmetic variation of candidate age (27 or 43 years of age). This was possible by using the same confederate candidate in both videotape conditions, varying the appearance of age with cosmetics, hair color and style, and dress. To verify that age was appropriately represented in the videotape, a Q-Sort of different cosmetic variations in candidate's age was conducted before developing the interview tape. Subjects participating in the Q-Sort, (graduate students in the university's Industrial Relations program), were given 11 different photographs of a

female who was to role play the teacher candidate in the videotape. Each photograph had a different cosmetic manipulation designed to vary the visual perception of age. Subjects were asked to rank order the photographs from "youngest" to "oldest" in age and give their perceptions of the age of the female in each photograph.

Results of the Q-Sort indicated that the "youngest" female had a mean age of 27 and the "oldest" female had a mean age of 43. The cosmetic manipulations for these two photographs were subsequently used in developing the interview videotape.

Candidate resumes were developed which included personal data, educational background, certification area, teaching experience, extracurricular experience, professional organizations, community activities, and future ambitions. All items were held constant with the exception of age (27 or 43 years old) and teacher preparation (physical education of social studies). Resumes followed the model used by Young & Voss (1984). The reported resume ages (27 or 43 years old) were established from the mean perceived visual age obtained in the Q-Sort activity and were appropriately matched to videotape conditions.

A position description was developed according to the recommendations of Palmer (1971) and included an outline of: the general nature of the position, features of the position, and

desired teacher behavior. The position description was used to standardize the subjects' perception of the position and to increase the amount of information about the job, a factor which has been shown to increase interrater reliability and reduce the impact of irrelevant candidate attributions (Langdale & Weitz, 1973; Wiener & Schneiderman, 1974).

An evaluation form developed by Young and Allison (1982) was distributed to all subjects for use in rating the candidates. This evaluation form utilized a four point Likert scale to rate the candidate in each of the following areas: (1) curricular knowledge, (2) ability to transmit knowledge, (3) willingness to contribute, (4) ability to create a friendly classroom environment, (5) potential for professional growth, and (6) ability to maintain student discipline.

A composite score (the sum of the equally weighted six candidate evaluation criteria) was computed for each subject. Use of these composite scores in previous studies have yielded a coefficient of consistency of .79 (Young & Voss, 1984), and a coefficient of stability of .93 (Wallich, 1984). The evaluation form also asked for an overall rating of the candidate (1-10). Subject responses to this item were used to validate the composite score.

Design

Design of the study was a 2x2 factorial design with age (27 or 43 years old) and position (physical education or social studies) being manipulated. Results were analyzed by a 2-way Analysis of Variance (ANOVA), with an alpha level of .05 as the designated level of significance.

Results

To verify if the variables of age and position were accurately perceived, a manipulation check was conducted on half of the study participants. Results indicated that 100% of the respondents correctly reported the candidate age given in their particular resume and videotape condition (27 or 43 years old). Similarly, 100% of the respondents receiving the physical education teacher resume accurately recalled the position identified, while 92% of the respondents receiving the social studies teacher resume accurately recalled the position identified. Therefore, both variable manipulations (age and position) were considered to be appropriately perceived by respondents.

Computations were performed to verify the reliability and validity of the evaluation instrument for the study participants. Reliability results indicated a Cronbach coefficient of consistency of .80. Validity was suggested by correlating the

composite score with the responses to the overall evaluation item, yielding a validity coefficient of .77.

Results of the two-way Analysis of Variance (p .05) of the composite scores from the candidate interview ratings revealed no significant effect due to candidate age, teaching position, or the interaction of age by position (See Table I).

[Insert Table I about here]

Discussion

These results seem to contradict those found in related studies that examined chronological age of teacher candidates. Specifically, both the Young and Allison (1982) study and the Young & Voss (1984) study found chronological age of teacher candidates to have a significant effect on candidate ratings. Further, Young & Voss (1984) revealed a significant age-by-position interaction. There are a number of possible reasons that the previous age effects on candidate ratings did not hold true in this study. First, the strength of the age manipulation in both the resume and videotape portions of this study (27 and 43 years old) was less than the strength of the age manipulation in the two previous resume studies (29 and 49 years old). This relative reduction in strength or potency of the age manipulation could well explain the nonsignificance of the age effect on candidate ratings. This possible explanation is reenforced by the fact that the group means for each of the

main effects, though not statistically significant, were all in the direction predicted from related studies (see Table II).

[Insert Table II about here]

Another difference between this study and related resume studies was the use of educational administration graduate students as subjects rather than practicing school administrators. Though generalizability may be more limited, many studies have suggested that there are no significant differences in the patterns of candidate evaluations made by students or inexperienced raters and experienced raters (Bernstein, Hakel, Harlan, 1975; Carlson, 1967; Carlson, Thayer, Mayfield, & Peterson, 1971; Dipboye, Fromkin, & Wiback, 1975; McGovern, Jones, & Morris, 1979).

A more critical difference between this study and the two related resume studies was the introduction of a videotaped interview in the candidate rating/selection process. There are several implications for decision making based on the addition of this face-to-face component of the selection process.

First, there is evidence to support the hypothesis that decision makers evaluate candidates differently after interviewing

them than they evaluate candidates based soley on paper credentials (Gorman, Clover, & Doherty, 1978; Okanes & Tschirgi, 1978). The impact of visual cues on decision making was illustrated by Carlson and Mayfield (1967) when they reported that over half of the managers in their selection study were willing to make their decision to hire or not hire based soley on the candidate's photograph.

Washburn and Hakel (1973) explored the impact of visual and verbal cues on candidate ratings in an interview setting. Subjects received either a transcript of an interview, the video only of the interview, or the actual audiovisual tape of the interview. Results indicated that visual cues (video only) were more important than verbal cues (transcript only) in accounting for differences in candidate ratings. Further, the combination of visual and verbal cues (audiovisual tape) was most important in accounting for differences in candidate ratings. Therefore, the medium by which candidate information was introduced (videotape interview plus resume v. resume only) may account for the differences in candidate ratings in this study as compared to the Young & Voss (1984) and Young and Allison (1982) resume studies.

The introduction of a videotaped interview component in the study has further implications for decision making because a greater amount of candidate information was available to the

evaluators than was the case with resume studies. Though decidedly brief, the interview script contained information which was more directly related to the evaluation criteria than the stimulus resumes used in previous research. Past research has suggested that evaluators' stereotypic conceptions diminish or are altered as the evaluation of a candidate progresses (London & Hakel, 1974). Also, candidate evaluations tend to be more accurate on relevant job dimensions than on more generalized job dimensions (Osburn, Timmrick, & Bigby, 1981). Results from these studies would suggest that the amount and relevancy of candidate information supplied could alter evaluators' ratings of a candidate, resulting in less reliance on stereotypic conceptions and consequent attributions in decision making.

Therefore, it is reasonable to expect that evaluators' ratings of candidates in the resume studies may have been strongly influenced by stereotypic conceptions of age because the resume contained limited information on which to base decisions. The information presented could also have created a certain degree of ambiguity for evaluators because the resume information may not have been as related to the evaluation criteria as the interview script. Consequently, evaluators in the resume studies may have relied on stereotyping to reduce stimulus ambiguity and to reach closure in decision making.

By introducing the videotaped interview information into the study, evaluators had access to a greater variety and amount of information than was available to the evaluators of resumes only. Also, the interview information presented may have been more relevant to the evaluative criteria. Consequently, reliance on the salient characteristic of candidate age may have become unnecessary or diminished in making attributions. The central stereotype effect (age) on decision making may have been muted by the introduction of this additional information.

Recommendations

Due to the contradictory nature of the results of the effect of candidate age on selection ratings in the resume and interview stages of selection, the following recommendations for future research are made.

First, it is recommended that a similar study be conducted in which the videotaped manipulation of age is stronger or more potent that was the case in the present study. It is suggested that a video manipulation of age which matches the resume manipulation of age in the previous studies (29 and 49 years old) might verify if the lack of manipulation strength was responsible for the nonsignificance of age in the selection ratings found in this study. Another alternative design could be an age manipulation with smaller intervals (e.g., 29, 39, and 49 years

old) to ascertain if age bias occurs only at specified ages or for specified age intervals.

A second recommendation is that subsequent studies be designed to separate the effect of the interview from other stages and procedures in the total selection process. A study investigating the the impact of age bias on selection decisions under conditions of varying types and amounts of candidate information is recommended. Manipulations of resume information (e.g., resume/no resume) in conjunction with manipulations of interview information (e.g., interview script only/interview video only/complete audiovisual interview tape) could help clarify the impact of the type and amount of information in selection procedures on the perceptual/attributional processes of stereotyping.

Another recommendation is that future selection research be designed to explore decision making in a relative context (multiple competing candidates rated), rather than an absolute context (single candidate rated against a standard). This recommendation is made in response to Arvey and Campion's (1982) recommendation that microanalytic research be pursued, but with increased emphasis on realistic evaluation practices. By collecting evaluative data on multiple candidates in competition for the same job, selection research would more closely resemble

actual selection practices in the field. Moreover, the valence of candidate characteristics (i.e., age) may be more demonstrable under conditions of relative comparison than under absolute conditions.

A final reccomendation is that more selection research be conducted in a variety of occupational settings (e.g. human services and government, as well as business and industry) in order to allow comparision of results across organizational cultures. These comparisons might reveal mediating variables which impact on selection decisions in different organizational settings (e.g. work type, organizational and role expectations, position stereotypes).

TABLE I

ANALYSIS OF VARIANCE

Composite Ratings by Candidate Age and Position

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF. OF F
Main Effects					
Age	.286	1	.286	.035	.853
Position	10.286	1	10.286	1.247	.269
Interaction	.286	1	.286	.035	.853
Age x Position	.286	1	.286	.035	.853
Explained	10.857	3	3.619	.439	.726
Residual	428.857	52	8.247	.439	.726
TOTAL	439.714	55	7.995		

N = 56 p .05

TABLE II

CELL MEANS

		Position		
		P.E.	Soc.St.	
Age	27 yrs.	16.64	17.36	17.00
		(N=14)	(N=14)	
	43 yrs.	16.36	17.36	16.86
		(N=14)	(N=14)	
		16.50	17.36	

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